

What is claimed is:

1. A stent assembly, comprising:

a spiral shaped elongate member having a first end and a second end, wherein the elongate member includes a plurality of spiraling loops extending between the last end
5 and the second end, the loops being spaceable so as not to touch each other;

a first contact attached adjacent the first end of the elongate member; and

a second contact attached adjacent the second end of the elongate member,
wherein the first and second contacts are coupled to power generator, the power generator
arranged to allow a current to be passed from the first contact to the second contact.

- 10 2. The stent assembly of claim 1, wherein the elongate member is constructed from one contiguous strip.

3. The stent assembly of claim 1, wherein the loops each have a rectangular cross-section.

- 15 4. The stent assembly of claim 1, wherein a height of the plurality of loops measured along a radial axis of the plurality of loops is greater than a width of the plurality of loops measured along an longitudinal axis of the plurality of loops

5. A stent assembly, comprising:

a spiral shaped elongate member having a first end and a second end, wherein the elongate member comprises a spiral having a plurality of loops; and

- 20 an intermediate support disposed between each of the loops and a next adjacent loop, the intermediate support zigzagging back and forth between each loop and the next adjacent loop.

6. The stent assembly of claim 5, wherein the elongate member is constructed from one contiguous strip.

- 25 7. The stent assembly of claim 5, wherein the intermediate support is constructed from one contiguous member.

8. The stent assembly of claim 5, wherein the loops are spaceable so as not to touch each other when the stent assembly is in an expanded position.

9. The stent assembly of claim 5, wherein the loops are constructed from a conductive material, and the intermediate sections are constructed from a non-conductive material.

5 10. The stent assembly of claim 5, wherein the intermediate support is accordion shaped and includes a plurality of first ends and second ends, and wherein the first ends of the first intermediate support engage a plurality of first loops, the second ends of the first intermediate support engage a next adjacent second loop.

10 11. The stent assembly of claim 5, wherein the intermediate supports are accordion shaped and correspond to each other, such that the intermediate supports cradle each other along substantially their entire length in a reduced position.

12. A method of inserting a stent assembly, comprising:
providing a spiral shaped elongate member having a plurality of loops, wherein the loops spaceable so as not to touch each other in an expanded position;
moving a first portion of the spiral shaped elongate member in a first direction;
15 moving a second portion of the spiral shaped elongate member, opposite the first portion, in a second direction that is opposite the first direction; and
abutting a first of the plurality of loops against a second of the plurality of loops, thereby placing the spiral shaped body in a reduced position.

20 13. A method of testing a stent assembly, comprising:
contacting a first end of a spiral shaped elongate member with a signal generator;
placing a current between the first end and a second end of the spiral shaped elongate member using the signal generator; and
measuring a resistance between the first end and the second end of the spiral
25 shaped elongate member.

14. A stent assembly, comprising:

a spiral shaped elongate member having a first end and a second end, wherein the elongate member includes a plurality of loops;

a first set of loops, of the plurality of loops, disposed between the first end and the second end of the elongate member; and

a second set of loops, of the plurality of loops, adjacent the first set of loops and disposed between the first end and the second end of the elongate member, wherein a spacing between the loops of the first set of loops is greater than a spacing between the loops of the second set of loops.

15. A stent assembly, comprising:

a spiral shaped elongate member having an inner surface and an outer surface, wherein the inner surface defines a lumen for the entry and exit of blood;

a fluid distribution member having an inlet and at least one outlet, the fluid distribution member being disposed adjacent over the spiral shaped elongate member; and

a fluid connection member having an inlet and an outlet, wherein the inlet of the fluid connection member is fluidly connected to a reservoir, and wherein the outlet of the fluid connection member is fluidly connected to the inlet of the fluid distribution member.

16. A stent assembly, comprising:

a spiral shaped elongate member having a first end and a second end, wherein the elongate member includes a plurality of loops; and

at least one set of hinges disposed between the first and second end of the spiral shaped elongate member, wherein each of the set of hinges are axially aligned along a length of the spiral shaped elongate member.

17. The stent assembly of claim 16, wherein each of the loops includes a hinge.

18. The stent assembly of claim 16, further including a second set of hinges disposed along the length of the spiral shaped elongate member opposite the at least one set of hinges.